

THE EFFECT OF PERCEIVED AND OBSERVED BEHAVIORS  
ON FEELINGS OF INTIMACY:  
A COMPARISON OF “INSIDER” VERSUS “OUTSIDER” PERSPECTIVES

A Dissertation

by

ALEXANDRA ELIZABETH MITCHELL

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2008

Major Subject: Psychology

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## ABSTRACT

The Effect of Perceived and Observed Behaviors on Feelings of Intimacy:  
A Comparison of “Insider” Versus “Outsider” Perspectives.

(May 2008)

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According to the interpersonal process model, interactions characterized by self-disclosure and empathic responding foster emotional intimacy between the two participating individuals (Reis & Shaver, 1988). This study provided “insider” and “outsider” perspectives of this model, examining the relation between perceived and observed behaviors in couple interactions and their relative contributions to the development of intimate feelings. The sample consisted of 102 community couples who completed measures of intimacy after engaging in videotaped discussions about relationship injuries that occurred both within and outside of the relationship. Both self-report and observational measures were used to assess disclosure and empathic responding during these discussions. There was significant agreement between self- and observer-report of men’s behavior, between self- and observer-report of women’s male partner’s behavior, and between partners’ report of disclosure and empathic responding.

There was mixed support for global distress and attachment style as predictors of differences between self- and observer-report. Whereas an earlier study using observational measures found gender differences in the effect of self-disclosure and empathic responding on intimacy (Mitchell et al., 2008), in this study self-report measures from the same sample indicated that perception of both an individual's own and his or her partner's disclosure and empathic responding predicted intimacy for both men and women. Observational measures provided incremental validity relative to self-report measures in predicting intimacy. These findings suggest that targeting certain personal and relational characteristics may be helpful in treating intimacy deficits and also indicate that self-report and observational measures provide unique information about the influence of behaviors on the development of intimate feelings in couple relationships.

This dissertation is dedicated to my family whose love and support have taught me the most important things I know about relationships.

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## INTRODUCTION

Jack and Molly come to therapy complaining that they “just can’t connect anymore.” In an attempt to better understand their problem, the therapist asks for an example. Molly volunteers, “Just last night I got into an argument with my sister on the phone because I am tired of her making bad decisions and then expecting me to bail her out. I tried to explain to Jack that I feel both frustrated by her behavior and responsible for helping her. She doesn’t have anyone else to count on. Well, he just sits there and looks at me like I’m an idiot and then tells me to stop worrying so much. He doesn’t care about me or my feelings.”

“That’s not what happened,” Jack interrupts. “I listened to everything you said. I was just trying to tell you that you didn’t need to feel guilty for setting some limits with your sister and you blew up. What was I supposed to say after that? Nothing I say is ever right.”

Of course, their therapist does not know what actually happened the night before. Did Molly engage in vulnerable disclosure and Jack think he responded empathically, but his response was actually dismissive? Did Molly disclose to Jack and he respond empathically, but she did not interpret his behavior accurately? Did Molly think she was engaging in personal disclosure but actually mumble just a few sentences, leading Jack to think only a small response was necessary? The therapist does not know whether the actual behaviors or the partners’ perceptions of these behaviors are influencing the couple’s level of intimacy. Different answers would suggest different interventions.

Intimacy is one of the most important, but also one of the least understood, aspects of close relationships. Research has found that intimacy is related both to couples’ relationship satisfaction (Greef & Malherbe, 2001; Toldstedt & Stokes, 1983) and to the psychological health of individual partners (Prager & Buhrmester, 1998; Waring & Patton, 1984). Moreover, lack of intimacy is one of the most common reasons couple seek therapy (Doss, Simpson, & Christensen, 2004; Geiss & O’Leary, 1981). Despite the importance of intimacy in relationships, the process through which it

develops is not well understood. This study examines and compares the influence of perceived and observed behaviors in discussions similar to the one just described, in order to gain a better understanding of how these behaviors influence intimacy and to inform clinical interventions for couples with intimacy deficits.

### *Conceptualizations of Intimacy*

Intimacy has been conceptualized as both an individual characteristic that influences how a person relates to others and as an interactional construct in relationships. Researchers have also examined intimacy as a relationship state and as a relationship process (Acitelli & Duck, 1987). Recent research, in particular, has focused on intimacy as an interactional relationship process, and different models of intimacy development have been proposed. Prager (1995) described intimate interactions as the basis for intimate relationships. She defined an intimate interaction as an exchange in which partners disclose private information, feel positively about themselves and each other, and believe the exchange conveys or increases the understanding between them. Cordova and Scott (2001) described intimacy as a process that develops from a sequence of events in which a speaker exhibits behavior that could result in interpersonal punishment, and the listener either does not punish this behavior or provides positive reinforcement in response.

A third model of intimacy, the interpersonal process model proposed by Reis and Shaver (1988), has received considerable empirical scrutiny and is the focus of the current study. According to this model, intimacy develops through interactions in which an individual discloses information about him- or herself and another person listens and

responds empathically. Reis and Shaver hypothesized that different types of disclosure would differentially influence intimacy. Specifically, they proposed that disclosure of emotions and thoughts may result in higher levels of intimacy than disclosure of facts, because the former type of disclosure gives the listener an opportunity to understand and respond to the speaker's core self. Similarly, Reis and Shaver distinguished among components of an empathic response in contrasting understanding, validation, and caring. Whereas understanding involves communicating an accurate perception of the behaviors, thoughts, and feelings disclosed by the speaker, validation extends beyond understanding to convey acceptance of the speaker and the thoughts and feelings being disclosed (Gottman, Markman, & Notarius, 1977). The affective component of empathic responding is caring, the expression of affectionate concern for the speaker. Reis and Shaver distinguished between intimate interactions and intimate relationships. An intimate relationship is not merely the result of repeated intimate interactions; rather, it is also shaped by such factors as the relationship history, the commitment of the two persons, and public recognition of the relationship.

*Previous Research on the Interpersonal Process Model of Intimacy*

Several studies have examined the interpersonal process model of intimacy in samples including undergraduate friend pairs, couples struggling with specific health concerns, and representative community couples. Using self-report measures of self-disclosure and empathic responding, these studies have generally provided support for the interpersonal process model of intimacy. Both self- and partner-disclosure have been found to predict intimacy (Castellani, Mitchell, Herrington, Joseph, & Snyder, 2004;

Laurenceau, Feldman Barrett, & Pietromonaco, 1998; Laurenceau, Feldman Barrett, & Rovine, 2005; Lippert & Prager, 2001). In regard to specific types of disclosure, Lippert and Prager found that both factual and emotional disclosure separately predicted intimacy, but Laurenceau et al. (1998) found that emotional disclosure was a more important predictor of intimacy than was factual disclosure. Empathic responding has been found to predict and partially mediate the relation between disclosure and intimacy (Castellani et al.; Laurenceau et al., 1998, 2005; Lippert & Prager; Manne, Ostroff, Rini, Fox, Goldstein & Grana, 2004).

Some of these studies have also examined gender differences in the effects of self-disclosure and empathic responding, but the findings have been mixed. A few studies found no gender differences in the effect of self-disclosure on intimacy (Lippert & Prager, 2001; Merves-Okin, Amidon, & Bernt, 1991). In contrast, Manne et al. (2004) found that both partner- and self-disclosure predicted intimacy in men, but that only partner-disclosure predicted intimacy in women. Laurenceau et al. (2005) found that self-disclosure was a stronger predictor of intimacy in men compared to women, but found no gender differences in the effect of partner-disclosure on intimacy. Laurenceau et al. also found that perceived partner responsiveness was a stronger predictor of intimacy for women than for men.

Mitchell et al. (2008) conducted the first study examining the relation of observational measures of self-disclosure and empathic responding to intimacy. In this study, couples engaged in videotaped discussions after which each partner completed measures of intimacy. An observational rating system was developed which addressed

several limitations of self-report measures commonly used in studies of the interpersonal process model. Specifically, the rating system allowed separate analyses of different types of disclosure and, in contrast to self-report measures which confound depth and frequency of disclosure, measured depth of each type of disclosure. The rating system also allowed analysis of each component of empathic responding. Results from this study indicated that men's own disclosure and empathic responding predicted their level of intimacy, whereas women's intimacy was predicted by their partner's disclosure and empathic responding. When men were speaking, their factual and emotional disclosure significantly predicted their intimacy, whereas cognitive disclosure did not. As listeners, men's caring, but not understanding nor validation, predicted their reports of intimacy. When women were speaking, their male partner's understanding and validation predicted their reports of intimacy; women's reports of intimacy as listeners were predicted by their partner's factual, emotional, and cognitive disclosure.

Only one previous study has examined both self-report and observational measures of self-disclosure and empathic responding, but this study examined the relation of these behaviors to attachment style rather than to intimacy (Grabill & Kerns, 2000). A sample of friend pairs engaged in a videotaped conversation after which each individual completed measures of disclosure, perceived empathic responding of the other, and attachment style. All of the observational measures significantly correlated with self-report measures of the same behavior, with measures of self-disclosure and of empathic responding correlating .45 and .34, respectively. However, secure attachment style was correlated with self-report, but not observational, measures of self-disclosure

and partner empathic responding. The authors suggested that secure individuals may be more likely to “preferentially attend to, remember, and interpret” behaviors that are consistent with their schema of intimate relationships and, therefore, report more intimate behaviors than an outside observer (p. 375). Fearful attachment style was related to higher levels of observed, but not self-report, ratings of disclosure. Individuals with a fearful attachment style may disclose more than they realize in an effort to establish the intimate relationships they simultaneously desire and fear. Overall, these results show that self-report and observational measures of disclosure and empathic responding were differentially related to attachment style.

Two important aspects of the interpersonal process model have not been examined in previous research. First, the model posits that each individual has characteristics which create an “interpretative filter” that influences their perception of the other’s behavior (Reis & Shaver, 1988, p. 378). Previous research has not compared perceived and observed behaviors in order to identify possible relational and personal characteristics that predict differences between them. In addition, according to Reis and Shaver’s model, the perception of the individuals, rather than the occurrence of particular behaviors, determines whether or not an interaction results in intimacy (Reis & Patrick, 1996). However, other intimacy researchers (Dorian & Cordova, 2004) focus exclusively on observed behaviors in order to understand the development of intimacy. Research has not compared the effects of perceived and observed behaviors to determine if they differ in their predictive validity of intimacy, or if observed measures provide incremental validity relative to self-report measures.

### *Comparing Self-Report and Observational Measures*

Olson (1977) argued that “insider” (the participant) and “outsider” (an external observer) perspectives provide unique information and that both are necessary for understanding interpersonal dynamics. Previous research of other constructs has found modest agreement between partners regarding reports of hostile behavior (Cui, O’Lorenz, Conger, Melby, & Bryant, 2005) and affect (Margolin, Hattem, John, & Yost, 1985), and higher levels of agreement between partners than between each partner and observational raters on measures of affect (Margolin et al.). Beyond determining the relation of self-, partner-, and observer-reports of self-disclosure and empathic responding, the field’s understanding of intimacy and clinical interventions targeting intimacy may be improved by examining relationship distress and attachment style as possible predictors of differences between self- and observer-reports.

### *Global Affection/Disaffection*

Weiss (1980) posited that partners’ perceptions of marital interactions are largely influenced by each individual’s global affection for his or her partner, a phenomenon he referred to as sentiment override. Subsequent research has found that marital satisfaction influences both the behaviors individuals notice and their interpretation of those behaviors. One study examining self- and observer-report of rates of positive relationship events found that partners who reported low levels of marital adjustment reported 50% fewer pleasurable events than were observed (Robinson & Price, 1980). Hawkins, Carrere, and Gottman (2002) conducted a study in which they compared self-report and observational measures of partner affect during a problem-



solving discussion. They found evidence of positive sentiment override in wives' ratings of husbands' low-intensity affect. Floyd (1988) conducted a similar study of behaviors exhibited during a problem-solving discussion, finding evidence of sentiment override in husbands' reports of wives' behavior. These findings suggest that global affection may also influence couples' reports of intimate behavior during discussions of relationship injury. Compared to observers, partners experiencing relationship distress may report lower levels of intimate disclosure and perceived empathic responding.

### *Attachment Style*

Partners' perceptions of one another's behavior may also be influenced by the attachment style of individual partners. Attachment theory is based on the work of Bowlby (1969, 1973, 1980) who described the role of infant-caregiver interactions in the development of internal working models about self and others. When the caregiver responds to the infant in a consistent and accepting manner, the infant develops a secure attachment style, characterized by viewing oneself as worthy of love and others as available and trustworthy. An insecure attachment style may result from interactions with an unpredictable or rejecting caregiver, leading the infant to view the self as unworthy of affection and others as unavailable or untrustworthy.

Hazen and Shaver (1987) were the first to apply attachment theory to adult romantic relationships. They found that attachment styles previously identified in infant-caregiver relationships also existed in adult romantic relationships. Research on attachment theory, as applied to both infants and adults, has led to the identification of two attachment dimensions: avoidance and ambivalence/anxiety (Brennan, Clark, &

Shaver, 1998). Individuals who are highly avoidant distrust others and tend to withdraw when they encounter relational distress (Campbell, Simpson, Kashy, & Rholes, 2001). Individuals who are highly anxious about attachment to others often attend closely to significant relationships, reacting with strong emotion and a negative ruminative style when they encounter relational distress.

Attachment style not only affects individuals' behaviors toward their partner (Bradford, Feeney, & Campbell, 2002; Simpson, Rholes, & Nelligan, 1992), but also influences their perception of their partner's behavior. Collins and Feeney (2004b) obtained both self-report and observational measures of support offered by the reporting partner's spouse before the reporting partner was asked to engage in a stressful task. Controlling for relationship expectations and observed levels of support, highly avoidant and highly anxious individuals perceived less support from their partners than did secure individuals. A study comparing partner reports of relationship satisfaction found that anxiously attached men were less accurate in perceiving their partner's feelings about the relationship (Tucker & Anders, 1999). Attachment style may influence both the behavior an individual attends to and the interpretation given to that behavior and, therefore, may be related to differences between self-report and observational measures of intimate behavior.

#### *Predictive Validity*

Olson (1977) suggested that assessing both insider and outsider views is important not only in order to compare to one another, but also because insider and outsider reports of behavior may differ in their predictive validity. Despite the

extensive literature on observational measures of couple behavior, this issue appears to be largely unexamined in regard to any couple behavior, including intimate behaviors. If couples' behavior leads to intimacy, then therapeutic interventions which promote disclosure of personal emotions and information and assist the listening partner to respond empathically (Johnson & Denton, 2002; Snyder & Schneider, 2002) may be helpful for couples with intimacy deficits. However, if partners' perceptions, rather than actual behaviors, lead to intimacy, then focusing on changing couple behavior without assessing and targeting partners' perceptions may not lead to higher levels of intimacy.

A review of the literature on the interpersonal process model indicates that perceived and observed behaviors may differ in their predictive validity of intimacy. Perceived self-disclosure and empathic responding appear to lead to intimacy for both men and women (Castellani et al., 2004). In contrast, an observational study found that men's own disclosure and empathic responding predicted their feelings of intimacy, whereas women's intimacy was predicted by their partner's disclosure and empathic responding (Mitchell et al., 2008). However differences across studies in operationalization of disclosure and empathic responding and in statistical analyses preclude the ability to conclude which factors may account for these differences.

#### *Incremental Validity*

Although comparison of the effect of perceived and observed behaviors may indicate important differences, it may also show that both predict level of intimacy. To the extent that both measures predict the same construct, it is important to examine the incremental validity of observational measures relative to self-report measures. Sechrest

(1963) described the necessity of examining incremental validity for “any test which is intended for applied, predictive use” (p. 154). Although many measures may predict a behavior better than chance, if a measure is intended to be used with other measures in clinical situations, it is important to establish that use of the additional measure adds to the validity of the predictions that can be made by simpler (i.e., self-report) measures. Given that the current study examines perceived and observed behaviors in community couples, findings regarding incremental validity may not generalize equally well to a clinical population. However, examining the incremental validity of observed relative to self-report measures may be useful in choosing which measures to use in future studies examining intimacy.

In addition to Olson’s (1977) contention that measures of perceived and observed behaviors provide unique information, there are also some differences between the observational (Mitchell et al., 2008) and self-report (Castellani et al., 2004) measures used in this study which suggest that the observational measures may provide incremental validity relative to the self-report measures (Haynes & Lench, 2003). Specifically, whereas self-report measures of disclosure have typically confounded depth and frequency of disclosure, the observational rating system was designed specifically to measure depth of disclosure. Intuitively it would seem that disclosure of a highly personal nature would have the potential to result in greater intimacy than the disclosure of many impersonal facts. Reis and Shaver (1988) also theorized that the personal nature of the disclosure leads to increased intimacy. Therefore, by assessing depth of disclosure, the observational measures may have incremental validity relative to the self-

report measures. In addition, in contrast to self-report measures, the observational measure was designed specifically to assess all types of self-disclosure and components of empathic responding as articulated by Reis and Shaver.

### *Purpose of the Present Study*

Research has generally shown support for the interpersonal process model of intimacy proposed by Reis and Shaver (1988). According to this model, exchanges in which a speaker self-discloses and a listener responds empathically lead to feelings of intimacy in both individuals. A premise of this model is that both individuals perceive disclosure and empathic responding to have occurred, and the majority of intimacy research has focused on assessing the influence of perceived behaviors. The purpose of this present study was to examine the relation of perceived and observed behaviors to one another and to compare their influence on feelings of intimacy.

The relations of self-, spouse-, and observer-reports were examined. Reis and Shaver (1988) theorized that relational and personal characteristics may influence partners' perceptions. In an attempt to identify those characteristics, this study also examined relationship distress and attachment style as predictors of discrepancies between self- and observer-reports.

The findings of previous studies suggest that the validity of perceived and observed behaviors in predicting feelings of intimacy may differ, but design, methodology, and analyses vary across studies precluding the ability to unambiguously evaluate these possible differences. This study compared the predictive validity of perceived and observed behaviors in the same sample. In addition, this study examined

the incremental validity of observed ratings relative to self-report ratings in predicting intimacy.

Several hypotheses were examined in this study:

Hypothesis 1: Self-report and observational measures will be moderately correlated with one another. Although methodological variance may influence the relation between self-report and observational data, it is hypothesized that these measures will be positively related.

Hypothesis 2: Global distress and attachment style will predict discrepancies between perceived and observed behaviors. Research has shown that level of both global affection/disaffection and attachment style have led to differences between self- and observer-reports of various behaviors, and it is predicted that the same result will be found in regard to intimate behaviors.

Hypothesis 3: Self-report measures will indicate that perception of both an individual's own and his or her partner's disclosure and empathic responding will predict intimacy for both men and women. Although previous analyses using observational data from this sample found that observational measures of men's own disclosure and empathic responding predicted their feelings of intimacy, whereas women's intimacy was predicted by their partner's disclosure and empathic responding, it is predicted that this gender difference will not be found using self-report data. This hypothesis is based on previous studies using self-report data, which did not find consistent gender differences in the effect of disclosure and empathic responding on intimacy.

Hypothesis 4: Observational measures will provide incremental validity relative to self-report measures in predicting intimacy. Theoretically, measures of perceived and observed behaviors provide unique information and, therefore, observational measures may provide incremental validity in relation to self-report measures. In addition, in contrast to self-report measures which confound assessment of depth and frequency of disclosure, the observational measure allows assessment of depth of disclosure, a theoretically important aspect of the development of intimacy.

## METHOD

### *Participants*

The participants in this study were 102 couples from a midsize southwestern community. Participants were randomly selected from the phone book and invited to participate in a study examining communication in couples. Participants were also given information about the study to give to acquaintances, and approximately 10% of the couples were recruited through this method. To be eligible for the study, participants had to be 18 years of age or older and in a cohabiting opposite-sex relationship for six months or longer.

Most (88%) of the couples were married. The couples had been in a relationship for an average of 13.5 years ( $SD = 13.6$ ), with length of relationship ranging from cohabiting 6 months to being married 54 years. The average age of participants was 41 years ( $SD = 14.9$ ) and participants had received an average of 16 years ( $SD = 2.7$ ) of education. The sample was largely Caucasian (91%), with some Hispanic American (6%), Asian American (2%), and African American (1%) participants. On the Global Distress Scale of the Marital Satisfaction Inventory-Revised (MSI-R; Snyder, 1997), mean  $T$ -scores for men and women, respectively, were 42.6 ( $SD = 14.0$ ) and 45.6 ( $SD = 15.9$ ), indicating that overall the sample was somewhat less distressed than the standardization sample for this measure.

### *Measures*

A battery of questionnaires was given to the couple before they were asked to engage in videotaped interactions. Of these questionnaires, a description of the three



that were used in this study is provided. In addition, a description is given of self-report measures of intimacy, disclosure, and empathic responding completed by each partner after each interaction and of observational measures of disclosure and empathic responding used to assess couple behavior during each interaction.

*Global Distress Scale (GDS) of the MSI-R*

This 22-item scale assesses an individual's overall dissatisfaction with the relationship, and includes items about general discontent, disharmony, and thoughts about ending the relationship (Snyder, 1997). The MSI-R provides normalized *T*-scores based on separate norms for men and women. The GDS had high internal consistency in this sample for both men ( $\alpha = .87$ ) and women ( $\alpha = .90$ ).

*Adult Attachment Questionnaire (AAQ)*

The AAQ is a 17-item self-report measure that assesses levels of avoidance and ambivalence in an individual's relationships (Simpson, Rholes, & Phillips, 1996). Level of ambivalence indicates the degree to which the individual is preoccupied with the idea of being abandoned and disappointed by his or her partner. Level of avoidance indicates the extent to which the individual prefers to remain distant and autonomous from his or her partner. Each item on the AAQ is rated on a 7-point Likert scale ranging from "strongly agree" to "strongly disagree." The AAQ is a standard measure of attachment style frequently used in community samples (Bouthillier, Julien, Dubé, Bélanger, & Hamelin, 2002; Gallo & Smith, 2001). Internal consistency in this sample was assessed for the avoidance scale (men:  $\alpha = .81$ ; women:  $\alpha = .78$ ) and for the ambivalence scale (men:  $\alpha = .78$ ; women:  $\alpha = .80$ ).

*Emotional Intimacy (EI) Subscale of the PAIR*

The EI subscale of the Personal Assessment of Intimacy in Relationships (PAIR; Schaefer & Olson, 1981) was used to evaluate participants' overall feelings of intimacy in their relationship before engaging in videotaped interactions. The EI subscale comprises 6 items rated on a 5-point Likert scale. Scores range from 6 to 30, with higher scores indicating greater intimacy in the relationship. The PAIR is frequently used to assess levels of trait intimacy in community couples (Denton, Burleson, Clark, Rodriguez, & Hobbs, 2000; Talmadge & Dabbs, 1990). The EI subscale had high internal consistency for both men ( $\alpha = .82$ ) and women ( $\alpha = .83$ ) in this sample.

*Post-Interaction Measure – Measure of Intimate Events (MIE)*

Following each videotaped interaction, each participant completed a MIE. This measure is based on Prager and Buhrmester's (1998) Interaction Record Form – Intimacy (IRF-I). The IRF-I is a 17-item measure which uses a 4-point Likert scale to assess self-disclosure, empathic responding, and intimacy following an interaction between two people. In this study, the IRF-I was modified to assess speaker and listener perceptions separately. Two questions including content explicitly sensitive and specific to this study's conceptualization of intimacy were chosen to assess feelings of emotional intimacy: "I feel closer to my partner following this interaction" and "This interaction felt intimate." A third item, "I feel more distant from my partner following this interaction," was considered for inclusion when reversed scored. However, including this third item, compared to including only the other two items, reduced indices of

internal consistency for both the speaker and the listener across conditions, and thus the third item was not included.

Intimacy was measured for men when they were speaking and when they were listening ( $\alpha = .84$  and  $.83$ , respectively), and for women when they were speaking and when they were listening ( $\alpha = .78$  and  $.85$ ). A Shapiro-Wilk test of normality revealed that the intimacy variables were not normally distributed ( $p < .01$ ). Following the procedure for data transformation outlined by Tabachnick and Fidell (2001), square root transformations were used to approximate a normal distribution.

This measure also assessed self- and partner- reports of disclosure and empathic responding. Three questions were used to assess factual, emotional, and cognitive disclosure, respectively: “I shared something personal or private during this interaction,” “I told my partner about my feelings or emotions,” and “I expressed a need, wish, or want.” Items assessing partner-report paralleled self-report (e.g., “My partner shared something personal or private during this interaction”). The three types of self-disclosure (factual, emotional, cognitive) and the three components of empathic responding (understanding, validation, caring) served as predictor variables of intimacy in this study. We evaluated the reasonableness of forming a linear composite of self-disclosure and of empathic responding as an average of the three respective types or components. With regard to self-report of an individual’s own disclosure and of his or her partner’s disclosure, item-total correlations revealed that each type of self-disclosure was correlated in a positive direction with the linear composite measure. The alpha internal consistency coefficient for men’s self-disclosure composite score was  $.45$ , and in

no case did removing a variable from the composite score increase the alpha. For women, the alpha internal consistency coefficient for the self-disclosure composite score was .38; excluding cognitive disclosure increased the alpha by .09. The alpha internal consistency coefficient for the composite score of men's report of their female partner's disclosure was .34 and exclusion of cognitive disclosure increased the alpha by .23. The composite score of women's report of their male partner's disclosure had an alpha internal consistency coefficient of .40, and excluding cognitive disclosure increased the alpha by .12.

Given that inclusion of cognitive disclosure decreased internal consistency of the composite self-disclosure score in three cases, analyses in which these composite scores were used were also conducted using composite scores consisting of only emotional and factual disclosure. The pattern of results was very similar to those of analyses in which cognitive disclosure was included in the composite variable. Given the similarity of the results and the theoretical importance of all three types of disclosure, the composite variables in the analyses reported included cognitive disclosure.

Three items from this measure were used to assess the components of empathic responding (understanding, validation, and caring) as articulated by Reis and Shaver (1988): "My partner understood me," "My partner was critical of me" (reversed scored), and "My partner was supportive and caring during the interaction." The item assessing validation is not optimal as the absence of criticism does not necessarily indicate the presence of validation but, of the items in the measure, it is most conceptually similar to validation. The composite scores for both men and women's self-report of empathic

responding had acceptable internal consistency ( $\alpha = .69$  and  $.66$ , respectively). The composite scores for men's report of their female partner's empathic responding and for women's report of their male partner's empathic responding had alpha internal consistency scores of  $.74$  and  $.81$ , respectively. As might be expected, given that the measure of validation indicated the absence of criticism rather than the presence of validation, omission of this item increased the alpha in all cases, but never by more than  $.07$ .

#### *Couples' Intimate Behavior (CIB) Rating System*

The CIB rating system assesses depth of factual, emotional, and cognitive self-disclosure of the speaker and the understanding, validation, and caring expressed by the listener in each interaction. The CIB is a macroanalytic system in which one rating of each behavior is made on a 5-point Likert scale for the entire interaction.

We evaluated the reasonableness of forming a linear composite of self-disclosure and of empathic responding as an average of the three respective types or components. For self-disclosure, item-total correlations revealed that each type of self-disclosure was correlated in a positive direction with the linear composite measure. The effects of removing any given type of self-disclosure varied across gender, and in no case did excluding a variable from the composite measure increase the alpha by more than  $.002$ . The self-disclosure composite score for men and women yielded alpha internal consistency coefficients of  $.71$  for both genders.

For empathic responding, item-total correlations revealed that each component of empathic responding was correlated in a positive direction with the linear composite

measure. The effect of removing a component of empathic responding also varied across gender, and in no case did excluding a variable from the composite measure increase the alpha more than .08. The empathic responding composite score yielded alpha internal consistency coefficients of .52 and .61 for men and women, respectively.

### *Design and Procedure*

This study reexamined and compared data analyzed in two earlier studies (Castellani et al., 2004; Mitchell et al., 2008). Couples were given the choice of completing the study at their home or at the investigators' university-based research laboratory. Prior to videotaped interactions, couples completed a battery of questionnaires, of which only the GDS of the MSI-R, the AAQ, and the EI subscale of the PAIR were used in this study.

Couples then engaged in two sets of videotaped interactions. The first set of discussions composed the low-threat condition. Individuals were asked to write about a situation in which their feelings were hurt by someone other than their partner and were informed that he or she would be asked to share this situation with the partner in a videotaped discussion. Participants were asked to choose a situation that they would rate from 5-7 on a 10-point scale of intensity, so that the situation would promote a discussion in which disclosure and empathic responding were likely to take place but which was not likely to cause intense emotional distress. The couples then engaged in a 7-minute videotaped discussion in which one partner (the speaker) was asked to share with his or her partner (the listener) the situation about which the speaker had written. The listener was instructed to respond however he or she wished. After the discussion,

each partner completed the post-interaction Measure of Intimate Events (MIE). The couple then reversed speaker and listener roles and engaged in a second discussion, after which they each again completed a post-interaction MIE. In the second set of discussions, the procedure was the same, except that each partner wrote about and shared with his or her partner a situation in which the partner had hurt his or her feelings. This second set of discussions composed the “high-threat” condition and was adapted from a design first used by Dorian and Cordova (2004).

Order effects were controlled by alternating the gender of the speaker. In half of the couples, the man was the speaker first in the low-threat condition and the woman was the speaker first in the high-threat condition. This order was reversed for the other couples. The low-threat condition always preceded the high-threat condition to minimize the possibility that discussions of the couple’s own relationship injuries would contaminate the couple’s discussions of hurtful interactions with others.

Trained raters used the Couples’ Intimate Behavior rating system to assess each couple discussion. The rater first rated the speaker’s factual, emotional, and cognitive self-disclosure. Then the rater watched the discussion a second time and rated the listener’s understanding, validation, and caring. The order of discussions assigned to raters was randomized to control for potential order and carryover effects.

### *Data Analysis*

There are two potential sources of data interdependence in this study. One possible source of interdependence results from each partner being involved in the same romantic relationship. Romantic partners are likely to share more characteristics than

randomly-assigned dyads, have a history of interaction characterized by mutually influencing behaviors and feelings, and experience many of the same contextual influences (Kenny, Kashy, & Cook, 2005). Therefore, partners' self-disclosure, empathic responding, and intimacy scores are likely to be more similar to one another than these scores would be from two individuals who are not in a relationship. A second potential source of interdependence is that the data are taken from partners participating in the same interaction. The scores of each individual in the interaction are influenced by the behavior of the other individual participating in that interaction, so that the scores of the partners in the interaction are more similar to one another than are scores taken from two individuals who have not interacted with one another (Campbell & Kashy, 2002). Failure to consider the nonindependence of observations may result in biased significance testing, resulting in tests that are either too liberal or too conservative (Kashy & Snyder, 1995; Kenny, 1995). Therefore, the current study used hierarchical linear modeling (HLM) in order to account for the potential interdependence in the data.

Preliminary analyses were conducted to examine the hierarchical structure of the data in the current study. Given that the data came from individuals in the same relationship and in the same interaction, significant variability in the dependent variables had the potential to be explained by the couple relationship, the interaction, or both. In order to determine if the data should be nested within the couple relationship, within the type of interaction, or within both simultaneously (i.e. cross-nested), we explored the significance of variability in each dependent variable explained by both couple relationship and type of interaction, as suggested by Raudenbush and Bryk (2002).



When nesting within couple and within interaction were examined simultaneously, results revealed that couple relationship explained significant variability in all cases ( $p < .01$ ), but interaction did not ( $p > .05$ ). Therefore, individual data were nested solely in the couple relationship in subsequent analyses.

This study examined the effects of self-report and observer-report of self-disclosure and empathic responding on intimacy. Conceptually, couples' post-interaction ratings of intimacy are likely to be a function of two factors: the enduring base level of intimacy in the relationship (trait intimacy as measured by the EI subscale of the PAIR) and the influences of specific interactions. Given that this study focused on how current, specific behaviors exhibited in couples' interactions influenced their immediate experience of intimacy, we analyzed the residualized MIE measure of post-interaction intimacy, controlling for participants' ratings of baseline intimacy on the EI subscale. Baseline intimacy was a positive predictor of both speaker intimacy (males:  $b = .02$   $t = 4.60$ ,  $p < .05$ ; females:  $b = .02$ ,  $t = 4.05$ ,  $p < .05$ ) and listener intimacy (males:  $b = .02$   $t = 5.31$ ,  $p < .05$ ; females:  $b = .02$ ,  $t = 4.84$ ,  $p < .05$ ) (Mitchell et al., 2008).

## RESULTS

### *Examining Relations Among Measures of Disclosure and Empathic Responding*

Pearson product-moment correlations were used to examine the relations among different measures of self-disclosure and empathic responding. Specifically, we examined the relations between participants' report of their own behavior and observers' report of their behavior, participants' report of their partner's behavior and observers' report of their partner's behavior, and participants' report of their partner's behavior and their partner's report of their own behavior. In each case, both individual component behaviors and composite scores were examined. When there was a significant finding for a composite score, men's and women's correlations were compared using the Pearson-Filon test with the Steiger modification to account for the interdependence of the data (Kashy & Snyder, 1995).

#### *Self- and Observer-Report*

Men's report of their own average disclosure was significantly correlated with observer-report of their disclosure ( $r = .19, p < .05$ ; see Table 1). Self-reports of factual, emotional, and cognitive disclosure were significantly correlated with observer-reports of these behaviors ( $r$ 's = .15, .21, and .15, respectively). Women's report of their own average disclosure was not significantly correlated with observer-report ( $r = .06, p > .05$ ). Although the relations between women's self-reports and observer-reports of separate types of disclosure were positive ( $r$ 's ranging from .05 to .11), none of the correlations was significant. In regard to self-disclosure, there was no significant

difference between the correlations of men's self-report with observer-report and women's self-report with observer-report ( $Z = .98, p > .05$ ).

Men's report of their own average empathic responding was significantly correlated with observer-report of their empathic responding ( $r = .24, p < .05$ ; see Table 2). Self-reports of validation and caring, but not of understanding, were significantly correlated with observer-reports of these behaviors ( $r$ 's = .17, .14, and .12, respectively). Women's report of their own average empathic responding was not significantly correlated with observer-report ( $r = .12, p > .05$ ). Although the relations among women's self-reports and observer-reports of separate components of empathic responding were marginally positive ( $r$ 's ranging from .01 to .13), none of these correlations was significant. The correlations between men's self-report and observer-report of average empathic responding and between women's self-report and observer-report of average empathic responding did not significantly differ ( $Z = .91, p > .05$ ).

#### *Self- and Observer-Report of Partner Behavior*

Men's report of their female partner's average disclosure was not significantly correlated with observer-report ( $r = -.01, p > .05$ ; see Table 3). The relations between men's reports and observer-reports of each type of partner disclosure were marginally positive ( $r$ 's ranging from .03 to .10), but nonsignificant. Women's report of their male partner's average disclosure was also not significantly correlated with observer-report ( $r = .13, p > .05$ ). Analyses of separate types of disclosure revealed that women's reports of their male partner's factual and emotional disclosure were significantly related to observer-reports ( $r$ 's = .15 and .21, respectively), but their report of cognitive

disclosure was not ( $r = .00$ ). The correlations between men's report of their female partner's average disclosure with observer-report of the same, and women's report of their male partner's average disclosure with observer-report of the same did not significantly differ ( $Z = .75, p > .05$ ).<sup>1</sup>

Men's report of their female partner's average empathic responding was not significantly correlated with observer-report ( $r = .11, p > .05$ ; see Table 4). The relations between men's reports and observer-reports of separate components of partner empathic responding ranged from .02 to .09, and were nonsignificant. In contrast, women's report of their male partner's average empathic responding was significantly correlated with observer-report ( $r = .31, p < .05$ ). Women's reports of their male partner's understanding, validation, and caring were also significantly correlated with observer-reports ( $r$ 's = .25, .15, and .19, respectively). There was no significant difference between the correlations of men's report of their female partner's average empathic responding with observer-report of the same, and women's report of their male partner's average empathic responding with observer-report of the same ( $Z = 1.41, p > .05$ ).

#### *Self- and Partner-Report of Partner Behavior*

Men's report of their female partner's average self-disclosure was significantly correlated with women's report of their own disclosure ( $r = .16, p < .05$ ; see Table 5). There were significant correlations between men's reports of their female partner's and women's reports of their own emotional and cognitive, but not factual, disclosure ( $r$ 's = .14, .17, and .12, respectively). Women's report of their male partner's average self-disclosure was also significantly correlated with men's report of their own

disclosure ( $r = .18, p < .05$ ). There was a significant correlation between women's report of their male partner's and men's report of their own cognitive disclosure ( $r = .31$ ), but not of factual ( $r = .09$ ) nor emotional disclosure ( $r = .06$ ). There was no significant difference between the correlations of men's report of their female partner's average disclosure with women's report of their own disclosure and women's report of their male partner's average disclosure with men's report of their own disclosure ( $Z = .17, p > .05$ ).

Men's report of their female partner's average empathic responding was significantly correlated with women's report of their own empathic responding ( $r = .59, p < .05$ ; see Table 6). There were significant correlations between men's report of their female partner's and women's report of their own understanding ( $r = .39$ ), validation ( $r = .41$ ), and caring ( $r = .46$ ). Women's report of their male partner's average empathic responding was significantly correlated with men's report of their own empathic responding ( $r = .56, p < .05$ ). There were significant correlations between women's report of their male partner's and men's report of their own understanding ( $r = .26$ ), validation ( $r = .44$ ), and caring ( $r = .48$ ). There was no significant difference between the correlations of men's report of their female partner's empathic responding with women's report of their own empathic responding and women's report of their male partner's empathic responding with men's report of their own empathic responding ( $Z = .45, p > .05$ ).

*Predictors of Differences Between Self- and Observer-Report*

For each analysis, the Level 1 equation specifies the individual behaviors that we hypothesized would explain significant variance in the relevant dependent variable. In order to distinguish between partners for analyses, we followed the recommendation of Raudenbush, Brennan, and Barnett (1995) and specified separate sets of parameters for men and women at Level 1. Additionally we examined whether the Level 1 variables varied significantly at Level 2. Significant random effects for a variable at Level 1 suggested that these variables differed significantly between couples. In every analysis there were significant random effects for male and female intercepts and so these were always allowed to vary randomly at Level 2. When significant random effects were found for other variables, we ran the model with and without random effects for the relevant variable. In no case did including random effects for additional variables alter the pattern of findings for main effects. Therefore, for the sake of consistency and parsimony, the following analyses include models with random effects for only male and female intercepts at Level 2.

Previous analyses revealed significant relations between self- and observer-reports of some behaviors, but these correlations were generally small and not all behaviors were significantly related. It was hypothesized that specific personal and relational characteristics (i.e., attachment style and marital distress) would predict differences between self-report and observer-report. The self- and observer-report scores of average disclosure and average empathic responding were standardized. Difference scores were created from these standardized scores (subtracting the observer-

report from the self-report) to examine the predictors of four types of discrepancies: the difference between self- and observer-report of disclosure, the difference between self- and observer-report of empathic responding, the difference between self- and observer-report of partner disclosure, and the difference between self- and observer-report of partner empathic responding.<sup>2</sup>

*Predictors of Differences Between Self- and Observer-Report of an Individual's Own Behavior*

Separate equations were used to examine global distress, avoidant attachment style, and ambivalent attachment style as predictors of differences between self- and observer-report of self-disclosure and of empathic responding. For each partner, the relevant variable was entered as a predictor of differences between self- and observer-report of an individual's own behavior at Level 1, with random effects at Level 2 for male and female intercepts (see Table 7).

*Self-disclosure.* Men with higher marital distress reported less disclosure relative to observer-report ( $p < .05$ ), but global distress was not a significant predictor of differences between self- and observer-report of disclosure for women. Higher levels of avoidant attachment in men predicted self-report of less disclosure than was observed ( $p < .05$ ), and there was a similar trend for highly avoidant women ( $p = .07$ ). Ambivalent attachment style was not predictive of differences between self- and observer-report of disclosure for either men or women.

*Empathic responding.* Global distress was a significant predictor of differences between self- and observer-report of empathic responding for men, with higher distress

predicting self-report of less empathic responding than was observed ( $p < .05$ ). Global distress was not related to differences between self- and observer-report of women's empathic responding. Highly avoidant women reported less empathic responding than was observed ( $p < .05$ ), but avoidant attachment was not predictive of differences between self- and observer-report of men's empathic responding. Men with highly ambivalent attachment styles reported less empathic responding relative to observer-report ( $p < .05$ ), but ambivalent attachment style was not predictive of differences between self- and observer-report of women's empathic responding.

*Predictors of Differences Between Self- and Observer-Report of Partner's Behavior*

Similar equations to the ones just described were used, except that the dependent variable was the difference between self- and observer-report of partner's behavior (see Table 8).

*Self-disclosure.* For men, global distress was a significant predictor of differences between self- and observer-report of female partner's disclosure, with maritally distressed males reporting less self-disclosure by their female partner than was observed ( $p < .05$ ). There was also a trend toward maritally distressed women reporting less disclosure by their male partner than was observed ( $p = .07$ ). Highly avoidant and highly ambivalent men reported less partner disclosure than was observed ( $p < .05$ ), but avoidance and ambivalence were not predictors of differences between self- and observer-report of partner disclosure for women.

*Empathic responding.* Global distress was a significant predictor of differences between self- and observer-report, with both men and women reporting less empathic



responding by their partner than was observed ( $p < .05$ ). Relative to observer-report, highly avoidant men reported less empathic responding by their female partner ( $p < .05$ , but avoidance was not a significant predictor of differences between self- and observer-reports of partner empathic responding for women. Ambivalent attachment style did not have an effect of differences between self- and observer-report of partner empathic responding for either men or women.

#### *Comparing Correlations of Self- with Observer-Reports of Behaviors*

Given that the effect of personal characteristics on differences between self- and observer-report was not always the same for both disclosure and empathic responding, we compared the correlations of self- with observer-report of disclosure and empathic responding using the Pearson-Filon test with the Steiger modification to account for the interdependence of the data (Kashy & Snyder, 1995). The correlation between men's self-report of their own disclosure and observer-report of their disclosure and between men's self-report of their own empathic responding and observer-report of their empathic responding did not significantly differ ( $Z = .37, p > .05$ ). There was also no significant difference between the correlation of women's self-report of their own disclosure and observer-report of their disclosure and the correlation of women's self-report of their own empathic responding and observer-report of their empathic responding ( $Z = .45, p > .05$ ). The correlation between men's self-report and observer-report of partner's average disclosure and between men's self-report and observer-report of partner's average empathic responding did not significantly differ ( $Z = .87, p > .05$ ). The correlation between women's self-report and observer-report of partner's average

disclosure and between women's self-report and observer-report of partner's average empathic responding did not differ significantly ( $Z = 1.28, p > .05$ ).

*Self- and Observer-Reports as Predictors of Intimacy*

In the following analyses we examined the effects of self-report of disclosure and empathic responding on intimacy. The effects of observer-report of disclosure and empathic responding on intimacy have been previously examined in the same sample (Mitchell et al., 2008) and findings from this study are presented in the tables to facilitate comparison. When a significant effect ( $p < .05$ ) for the composite score of self-disclosure or empathic responding was identified, each type of disclosure or component of empathic responding was substituted into the equation in place of the composite score of the respective behavior and significant effects were examined. As previously described, the intimacy dependent variable is the residualized MIE measure of post-interaction intimacy, controlling for participants' ratings of baseline intimacy on the EI subscale.

In the following equations, actor behaviors refer to an individual's self-report of his or her own behaviors. Partner behaviors refer to an individual's report of his or her partner's behaviors.

*Speaker Intimacy*

The main effects of self-disclosure and empathic responding and the interaction effect of self-disclosure and empathic responding on speaker intimacy were estimated at Level 1 using the following equation:

$$\begin{aligned}
Y_i = & (\text{male})_i [\pi_{m0i} + \pi_{m1i} (\text{actor disclosure}) + \pi_{m2i} (\text{partner empathic responding}) \\
& + \pi_{m3i} (\text{actor disclosure} * \text{partner empathic responding})] \\
& + (\text{female})_i [\pi_{f0i} + \pi_{f1i} (\text{actor disclosure}) + \pi_{f2i} (\text{partner empathic responding}) \\
& + \pi_{f3i} (\text{actor disclosure} * \text{partner empathic responding})] + e_i
\end{aligned}$$

with random effects at Level 2 for the male and female intercepts (see Table 9). No significant interaction effects were found; therefore interaction variables were not included in subsequent analyses in which specific types of disclosure and components of empathic responding were substituted for composite scores.

Men's self-disclosure had a significant effect on their level of intimacy, with more personal disclosure predicting greater levels of intimacy ( $p < .01$ ; see Table 9). Subsequent analyses revealed that greater factual and cognitive disclosure predicted higher levels of male intimacy ( $b = .12, t = 5.27, p < .05$  and  $b = .06, t = 3.12, p < .05$ , respectively), but emotional disclosure was not predictive of intimacy. Men's report of their female partner's empathic responding also had an effect on men's intimacy ( $p < .01$ ; see Table 9). Men reported higher levels of intimacy when they perceived greater understanding, validation, and caring from their female partner ( $b = .12, t = 5.87, p < .05$ ;  $b = .05, t = 2.23, p < .05$ ; and  $b = .12, t = 5.81, p < .05$ , respectively).

Women's report of their own disclosure had a significant effect on their level of intimacy ( $p < .01$ ; see Table 9). Women's factual and cognitive disclosure were positively related to women's report of intimacy ( $b = .11, t = 5.08, p < .05$  and  $b = .04, t = 3.20, p < .05$ , respectively), but their emotional disclosure was not predictive of

intimacy. Women's report of their male partner's empathic responding had a significant effect on intimacy, with higher levels of empathic responding predicting greater intimacy ( $p < .01$ ; see Table 9). Women who perceived that their partner engaged in higher levels of understanding, validation, and caring reported higher levels of intimacy ( $b = .13, t = 8.09, p < .05$ ;  $b = .09, t = 5.43, p < .05$ ; and  $b = .14, t = 7.35, p < .05$ ).

#### *Listener Intimacy*

Self-disclosure, empathic responding, and the interaction of self-disclosure and empathic responding were entered as predictors of listener intimacy at Level 1 using the following equation:

$$\begin{aligned}
 Y_i = & (\text{male})_i [\pi_{m0i} + \pi_{m1i} (\text{actor empathic responding}) + \pi_{m2i} (\text{partner disclosure}) \\
 & + \pi_{m3i} (\text{actor empathic responding} * \text{partner disclosure})] \\
 & + (\text{female})_i [\pi_{f0i} + \pi_{f1i} (\text{actor empathic responding}) + \pi_{f2i} (\text{partner disclosure}) \\
 & + \pi_{f3i} (\text{actor empathic responding} * \text{partner disclosure})] + e_i
 \end{aligned}$$

with random effects at Level 2 for the male and female intercepts (see Table 10). No significant interaction effects were found; therefore interaction variables were not included in subsequent analyses in which specific types of disclosure and components of empathic responding were substituted for composite scores.

Men's intimacy as listeners was predicted by their report of their own empathic responding ( $p < .01$ ; see Table 10), with higher levels of empathic responding predicting more intimacy. Men's report of greater understanding, validation, and caring were

significantly related to higher levels of intimacy ( $b = .09$ ,  $t = 3.04$ ,  $p < .05$ ;  $b = .05$ ,  $t = 2.33$ ,  $p < .05$ ; and  $b = .11$ ,  $t = 3.47$ ,  $p < .05$ ). Men's perception of their female partner's disclosure also had a main effect on men's report of intimacy ( $p < .01$ ; see Table 10). Men's report of their female partner's factual and cognitive disclosure positively predicted men's intimacy ( $b = .10$ ,  $t = 4.35$ ,  $p < .05$  and  $b = .07$ ,  $t = 3.58$ ,  $p < .05$ , respectively), but their report of their female partner's emotional disclosure was not related to intimacy.

Women's intimacy in the listening role was predicted by their perception of their own empathic responding ( $p < .01$ , see Table 10), with greater understanding validation, and caring relating to higher levels of intimacy ( $b = .14$ ,  $t = 5.11$ ,  $p < .05$ ;  $b = .05$ ,  $t = 2.33$ ,  $p < .05$ ; and  $b = .16$ ,  $t = 6.31$ ,  $p < .05$ , respectively). Women's reports of their male partner's empathic responding also had a main effect on women's reports of intimacy ( $p < .01$ , see Table 10). Women reported higher levels of intimacy when they perceived that their male partner had engaged in higher levels of factual, emotional, and cognitive disclosure ( $b = .12$ ,  $t = 4.42$ ,  $p < .05$ ;  $b = .13$ ,  $t = 4.56$ ,  $p < .05$ ; and  $b = .04$ ,  $t = 2.62$ ,  $p < .05$  respectively).

#### *Effect of Threat Condition*

Speaker and listener intimacy were assessed in both a high-threat and a low-threat condition. In order to examine whether the level of intimacy experienced by the listener or the speaker differed by condition, the following equation was used:

$$Y_i = \pi_{1i}(\text{male intercept}) + \pi_{2i}(\text{male condition}) \\ + \pi_{3i}(\text{female intercept}) + \pi_{4i}(\text{female condition}) + e_i$$

with random effects for the male and female intercepts at Level 2. Condition type was not a significant predictor of either speaker or listener intimacy ( $p > .05$ ). We also entered the interaction of condition with self-disclosure and of condition with empathic responding as predictors of speaker and listener intimacy. When women were speaking, their report of their own self-disclosure was more predictive of their intimacy in the low-threat condition ( $b = -.10, t = -2.24, p < .05$ ). Their perception of their male partner's empathic responding was more predictive of women's intimacy in the high-threat condition ( $b = .08, t = 2.06, p < .05$ ). When women were in the listening role, their report of their male partner's disclosure was more predictive of their intimacy in the low-threat condition ( $b = -.14, t = -2.04, p < .05$ ). There was no effect of condition interaction terms on men's speaker or listener intimacy.

#### *Incremental Validity of Observer-Report*

One of the hypotheses of this study was that, to the extent that self-report and observational measures both predicted intimacy, observational measures would provide incremental validity relative to self-report measures in predicting intimacy. In other words, given the findings of a previous study (Mitchell et al., 2008), it was predicted that, after controlling for the effects of self-report measures, men's intimacy would be predicted by observer-report of their own behavior and women's intimacy would be predicted by observer-report of their male partner's behavior.

### *Speaker Intimacy*

To examine the incremental validity of observer-report of disclosure relative to self-report of disclosure in predicting intimacy, self-report of disclosure and observer-report of disclosure were entered as predictors of speaker intimacy at Level 1 using the following equation:

$$\begin{aligned}
 Y_i = & (\text{male})_i [\pi_{m0i} + \pi_{m1i} (\text{self-report disclosure}) \\
 & + \pi_{m2i} (\text{observer-report disclosure})] \\
 & + (\text{female})_i [\pi_{f0i} + \pi_{f1i} (\text{self-report disclosure}) \\
 & + \pi_{f2i} (\text{observer-report disclosure})] + e_i
 \end{aligned}$$

with random effects at Level 2 for the male and female intercepts. After controlling for the effect of men's self-report of their own disclosure, observer-report of men's disclosure had a significant effect on men's speaker intimacy, with more disclosure predicting higher levels of intimacy ( $b = .06, t = 2.93, p < .05$ ).

Self-report of partner's empathic responding (e.g., women's report of their male partner's empathic responding) and observer-report of partner's empathic responding were entered as predictors of speaker intimacy at Level 1 using the following equation:

$$\begin{aligned}
Y_i = & (\text{male})_i [\pi_{m0i} + \pi_{m1i} (\text{self-report of partner empathic responding}) \\
& + \pi_{m2i} (\text{observer-report of partner empathic responding})] \\
& + (\text{female})_i [\pi_{f0i} + \pi_{f1i} (\text{self-report of partner empathic responding}) \\
& + \pi_{f2i} (\text{observer-report of partner empathic responding})] + e_i
\end{aligned}$$

with random effects at Level 2 for the male and female intercepts. After controlling for the effect of women's report of their male partner's empathic responding on intimacy, observer-report of men's empathic responding had a significant effect on women's intimacy as speakers, with women reporting greater intimacy when their male partners engaged in higher levels of disclosure ( $b = .07, t = 2.05, p < .05$ ).

#### *Listener Intimacy*

To examine the incremental validity of observer-reports relative to self-reports of behaviors in predicting listener intimacy, the equations described above were used, substituting listener intimacy as the dependent variable. After controlling for the effect of men's self-report of their own empathic responding, observer-report of men's empathic responding had a significant effect on men's intimacy in the listening role, with greater empathic responding predicting higher levels of intimacy ( $b = .06, t = 2.03, p < .05$ ). After controlling for the effect of women's report of their male partner's disclosure, observer-report of men's disclosure had a significant effect on women's report of listener intimacy, with greater disclosure predicting higher levels of intimacy ( $b = .07, t = 2.19, p < .05$ ).



## CONCLUSION

This study sought to enrich our understanding of the development of intimacy in couple relationships by examining the relation between perceived and observed behaviors and their relative influence on intimacy during discussions of relationship injury. There was significant agreement between self- and observer-report of men's, but not women's, behavior. In contrast, there were significant positive correlations between self- and observer-report of women's male partner's behavior, but not between self- and observer-report of men's female partner's behavior. As predicted, partners' perceptions of disclosure and empathic responding were significantly positively correlated. This study found mixed support for marital distress and attachment style as predictors of differences between self- and observer-reports of intimate behaviors. In every case in which a variable was a significant predictor of differences, higher levels of the variable predicted self-report of less of the relevant behavior than was observed. With regard to men, global distress predicted discrepancies between both self- and observer-report of their own behavior and self- and observer-report of their female partner's behavior. For women, global distress only had an effect on differences between self- and observer-report of their male partner's behavior. For men, avoidant attachment style was a predictor of differences between self- and observer-report of all behaviors, with the exception men's empathic responding. Avoidance predicted the difference between self- and observer-report of women's empathic responding and there was a trend in the same direction for women's self-disclosure; avoidant attachment style was not related to differences between self- and observer-report of women's male partner's behavior. The

only differences that were predicted by ambivalent attachment style were between self- and observer-report of men's empathic responding and between self- and observer-report of men's female partner's disclosure.

In contrast to an earlier study in which observational measures indicated gender differences in the effect of behaviors on intimacy (Mitchell et al., 2008), self-report measures indicated that perception of both an individual's own and his or her partner's disclosure and empathic responding predicted intimacy for both men and women. Observational measures provided incremental validity relative to self-report measures in predicting intimacy. Specifically, after controlling for the effect of self-report measures, men's intimacy was predicted by observer-report of their own behavior and women's intimacy was predicted by observer-report of their male partner's behaviors.

#### *The Relation of Self- and Observer-Report of Behavior*

It bears noting that self- and observer-reports of an individual's own behaviors were significantly correlated for men but not for women, and that self- and observer-reports of partner's behaviors were significantly correlated for women but not for men. Previous research has shown that women tend to have an interdependent self-concept, defining themselves in terms of their relationships with others (Cross & Madson, 1997). In contrast, men's self-concept tends to be based more heavily on their own individual characteristics. Research examining individuals' interactions has found that women attend to and think about the behavior of the individual with whom they are interacting more than do men (Ickes, Robertson, Tooke, & Teng, 1986). Therefore, it may be that different findings in this study for men and women result in part from men's tendency to

focus on their own behavior and women's tendency to focus on their partner's behavior. However, it should also be noted that previous studies examining congruence of self- and observer-reports, although few in number, have generally found significant agreement across gender (Cui et al., 2005; Floyd & Markman, 1983). The failure to find significant relations between self- and observer-report across all comparisons may also be influenced by limited variability in disclosure and empathic responding in this sample of relatively maritally satisfied individuals.

The finding of significant correlations between partners' reports is consistent with the finding of previous research (Rhoades & Stocker, 2006). Partners' reports were expected to be significantly correlated partly because of common method variance (Campbell & Fiske, 1959). In addition, Gottman (1979; Gottman & Porterfield, 1981) suggested that there may be agreement between partners' perceptions of behaviors because partners communicate through a private message system, using nonverbal signals which have acquired idiographic meaning through the history of the relationship. In support of this hypothesis, Margolin et al. (1985) found higher agreement between partners than between each partner and an outside observer when both partners and observers were using observational measures.

#### *Predictors of Discrepancies Between Self- and Observer-Report*

The results of this study indicate that sentiment override influenced both men's and women's perception of their partner's intimate behaviors. Individuals who felt negatively about their relationship reported that their partner engaged in less disclosure and empathic responding than was observed and individuals who felt positively about

their relationship reported that their partner engaged in more disclosure and empathic responding than was observed. Whereas previous literature has focused almost exclusively on the role of sentiment override in individuals' perceptions of their partner's behavior (Hawkins et al., 2002; Notarius, Benson, Sloane, Vanzetti, & Hornyak, 1989; Weiss, 1980), this study also found that men's overall satisfaction with the relationship influenced their report of their own behavior, with higher distress predicting reports of less disclosure and empathic responding than was observed. Compared to men, women tend to engage in more personal disclosure and empathic responding in their relationships (Dindia & Allen, 1992; Reis 1998), and they are better skilled at emotional communication (Cordova, Gee, & Warren, 2005). Given that engaging in intimate behaviors is likely to be a normative process with which women are comfortable, women's relationship distress may be less likely to influence their perception of their own behavior. In contrast, men may be likely to engage in intimate behaviors mostly in the context of a romantic relationship; thus men's feelings about the relationship may be more likely to influence their perception of their own behaviors.

Highly avoidant men tended to report that both they and their partner engaged in lower levels of intimate behavior than were observed, whereas highly avoidant women reported lower levels of intimate behaviors by themselves than were observed. The literature on the influence of attachment style on individuals' perception of their partner's behaviors is limited (Collins & Feeny, 2004b) and, to our knowledge, research has not previously examined the influence of attachment style on the perception of one's own behavior. Individuals with avoidant attachment styles prefer to maintain emotional

distance in their relationships with others (Brennan et al., 1998) and research has previously found that avoidant individuals engage in less personal disclosure (Mikulincer & Nachshon, 1991). This study indicates that this desire for emotional distance is also associated with individuals' underestimating their own level of intimate behaviors.

Compared to avoidant attachment style, ambivalent attachment style predicted fewer differences between perceived and observed behaviors, with highly ambivalent men reporting that they engaged in less empathic responding than was observed and that their female partner engaged in less self-disclosure than was observed. The limited effect of ambivalent attachment may be understood in the context of a review provided by Collins and Feeny (2004a); they noted the inconsistent findings in the literature on the role of ambivalent attachment style in intimate relationships, and suggested that these findings may be explained by the tendency of ambivalent individuals to alternately act and react in ways that both promote and undermine the development of intimacy. In this study, the desire of ambivalent individuals for emotional intimacy may have led them to attend closely to the behaviors exhibited in the interactions (Brennan et al., 1998), but the fear of rejection may have also led them to misinterpret ambiguous behaviors (Mikulincer, Florian, Cowan, & Cowan, 2002), resulting in no clear effect of ambivalent attachment style on differences between self- and observer-reports.

#### *Self- and Observer-Reports as Predictors of Intimacy*

By examining self-report data from the same sample in which observer-report data were previously examined (Mitchell et al., 2008), this study allows direct

comparison of the effect of perceived and observed behaviors on feelings of intimacy. In this study, when participants disclosed a relationship injury, both their perception of their own self-disclosure and of their partner's empathic responding predicted their level of intimacy. When participants responded to their partner's disclosure of a relationship injury, both their perception of their own empathic responding and their partner's level of disclosure predicted their level of intimacy. The findings of this study provide further support for the interpersonal process model of intimacy (Reis & Shaver, 1988), and are consistent with findings of other studies examining the effect of self-report measures of disclosure and empathic responding on intimacy (Laurenceau et al., 1998, 2005; Lippert & Prager 2001).

The results from self-report data contrast with the findings from observational data, which indicated that men's intimacy was predicted by their own behaviors, whereas women's intimacy was predicted by their male partner's behavior (Mitchell et al., 2008). This study indicated that the effects of observed behaviors were still significant predictors of intimacy, after controlling for the effect of perceived behaviors on intimacy. There are several possible explanations for observational measures providing incremental validity relative to self-report measures in predicting intimacy. Self-report measures may be influenced by participants' desire to present both their own and their partner's behavior in a socially desirable way (Edwards, 1953; 1959). In addition, there are important differences in the construction of the observational and self-report measures of disclosure and empathic responding. Whereas the self-report measure confounds depth and frequency of disclosure, the observational rating system

was designed specifically to measure depth of disclosure, which is theoretically more important to the development of intimacy (Reis & Shaver, 1988). In addition, in contrast to the self-report measure, the observational rating system was designed specifically to assess all types of self-disclosure and components of empathic responding as articulated by Reis and Shaver. Finally, raters underwent extensive training before using the observational rating system, whereas participants were not trained to rate nor primed to think about disclosure or empathic responding during their discussions.

Although there have been few gender differences found in studies using self-report data, those that have been identified are consistent with those found using observational data (Laurenceau et al., 2005; Manne et al., 2004). These previous findings lend further credence to the existence of gender differences, which may be more clearly evident when measures of behavior are not contaminated by participants' efforts to report behaving in a socially desirable manner. Analysis of agreement between self- and observer-report of behavior suggests that women are more likely than men to attend to their partner's behavior, and examination of the effects of partners' behaviors on intimacy suggests that women's intimacy is more influenced by their partner's behavior. In contrast, men attend to, and are influenced by, their own behaviors. As previously noted, these findings may be partially explained by gender differences in the formation of self-concept, with men defining themselves by focusing on their own attributes and women's self-concept being influenced by their interactions with others (Cross & Madson, 1997; Guimond, Chatard, Martinot, Crisp, & Redersdorff, 2006). Women may also evaluate behavior differently than men. Research has found that, during couple

interactions, women are more likely than men to process information in terms of their relationship (Sullivan & Baucom, 2005). Therefore, disclosure and empathic responding play a role in the development of intimate feelings in both women and men, but the manner in which they influence intimacy varies across gender.

With respect to the self-report data, analysis of the effects of types of self-disclosure and components of empathic responding on intimacy generally supports the importance of each behavior in fostering intimacy as proposed in the interpersonal process model (Reis & Shaver, 1988). When men and women were disclosing a relationship injury, their factual and cognitive, but not emotional, disclosure predicted their intimacy. When men were listening to their partner describe a relationship injury, their partner's factual and cognitive disclosure predicted men's intimacy. Women's intimacy as listeners was predicted by their male partner's factual, emotional, and cognitive disclosure. The failure to find that emotional disclosure predicted intimacy in most cases is unexpected. According to Reis and Shaver (1988), because cognitive and emotional disclosure allow the individual to reveal more personal aspects of him- or herself than does disclosure of factual information, the former should be more strongly related to intimacy. Observational measures of couple behavior indicated that emotional disclosure predicted intimacy for both men and women (Mitchell et al., 2008). It may be that discussions of a relationship injury may elicit either the disclosure of vulnerable emotions which may lead to intimacy or the disclosure of contempt which may lead to further emotional distance. The observational measure did not consider expressions of contempt as emotional disclosure, but participants may have. Therefore, self-report



ratings of emotional disclosure may have been associated both negatively and positively to intimacy.

Self-report ratings of each component of empathic responding were related to intimacy for both men and women across speaker and listener roles. Analyses using observational measures found that when men were listening, their caring, but not understanding nor validation, predicted their reports of intimacy (Mitchell et al., 2008). When women were speaking, observer-reports of their male partner's understanding and validation predicted their report of intimacy. The differences between the effects of self-report and observational data may indicate that participants closely associate various components of empathic responding, and so their ratings of each separate component are influenced by their experience of other components.

### *Clinical Implications*

Distressed couples whose primary complaint is a lack of intimacy may benefit from learning how to engage in conversations characterized by constructive personal disclosure and empathic responding. Such discussions may be particularly helpful in regaining closeness after relationship injuries occur. However, this study also suggests that it is important to target each individual's perceptions of these behaviors, rather than merely the behaviors themselves. Individuals who are unhappy in their relationship may be less likely to recognize their partner's positive behaviors, and men may also underestimate their own positive behaviors. It may be helpful for therapists to target such perceptual biases as selective attention, and focus on identifying these positive behaviors for couples. In addition, improving other aspects of the relationship that are

causing distress may lead couples to see their intimate behaviors more positively. Individuals with insecure attachment styles may also have difficulty accurately perceiving these positive behaviors and, therefore, may benefit from therapy which focuses on helping them to recognize the influence of past relationship injuries on current relationship functioning (Snyder & Schneider, 2002). The findings of this study also suggest that observational, as well as self-report, measures may be useful in evaluating couples with intimacy deficits.

#### *Limitations and Future Directions*

The sample in this study consisted of relatively nondistressed married or cohabiting couples. Given that predictive and incremental validity are conditional concepts, validity findings in this study may not generalize equally well to couples in a clinical population. In addition, the effects of relationship distress and insecure attachment style on differences between perceived and observed behaviors may be more significant, or differ, in populations with a greater range and variability of these characteristics. Another limitation of the sample in this study is that length of couples' relationship varied considerably. Intimacy processes likely vary across relationship stages, and couples who have been together for a long time may rely on more implicit and less overt behaviors to foster and sustain intimacy.

Although this study's design facilitated separate analyses of intimacy in both speaker and listener roles, it may concurrently have constrained couples' behavior unnaturally. Couples may at times engage in discussions in which the topic is more about one partner than the other, but it is likely that couples more often engage in

reciprocal disclosure and responding during a single interaction. This study also used global assessments of partners' behaviors and perceived intimacy and, therefore, does not provide information about the immediate, moment-to-moment effects of individual behaviors on intimacy.

Future research is needed to determine the relation between perceived and observed behaviors and their relative contribution to intimacy in clinic couples. Clinic couples are more likely to be distressed and may be more likely to have an insecure attachment style, which may influence their perception of intimate behaviors. In addition, the self-report and observational measures used in the current study varied somewhat in their operationalization of intimate behaviors. Differences in the predictive validity of the measures, as well as the incremental validity of observational relative to self-report measures, will be better understood through research in which the measures are more parallel.

This study examined the interpersonal and intrapersonal factors that influence the development of intimacy in couple relationships. The results provide further support for the role of disclosure and empathic responding in the interpersonal process model of intimacy (Reis & Shaver, 1988) and also provide a preliminary understanding of the personal and relational characteristics that may influence an individual's perception of intimate behaviors. The findings of this study affirm the importance of examining both participants' perceptions and observed behaviors in understanding the development and maintenance of intimacy in couple relationships.

## ENDNOTES

<sup>1</sup> When cognitive disclosure was excluded from the average disclosure variables, women's report of their male partner's average disclosure was significantly correlated with observer-report ( $r = .27, p < .05$ ). However, there was still no significant difference between the correlations of men's report of their female partner's average disclosure with observer-report of the same, and women's report of their male partner's average disclosure with observer-report of the same ( $Z = 1.42, p > .05$ ).

<sup>2</sup> Differences between self- and observer-report of behaviors were also examined using residualized self-report scores of average disclosure and empathic responding as the dependent variables, controlling for observer-reports of these behaviors. The significant predictors of residual scores were similar to the significant predictors of difference scores, with a few exceptions. The results of analyses using residualized scores are presented in Tables 11-12. Given the similarity in the results, we chose to present the analyses which used difference scores because they lend themselves to less ambiguous interpretation in terms of relationship processes.

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# APPENDIX

Table 1

Correlations Between Self- and Observer-Report: Self-Disclosure

	Self-Report				Observer-Report			
	Factual Disclosure	Emotional Disclosure	Cognitive Disclosure	Average Disclosure	Factual Disclosure	Emotional Disclosure	Cognitive Disclosure	Average Disclosure
<u>Self-Report</u>								
Factual Disclosure	1.00	.28**	.29**	.71**	<b>.15*</b>	.15*	.12	.18*
Emotional Disclosure	.36**	1.00	.17*	.52**	.15*	<b>.21**</b>	.15*	.21*
Cognitive Disclosure	.22**	.16*	1.00	.83**	.10	-.04	<b>.15*</b>	.08
Average Disclosure	.66**	.49**	.85**	1.00	.17*	.10	.19**	<b>.19**</b>
<u>Observer-Report</u>								
Factual Disclosure	<b>.05</b>	.09	.00	.04	1.00	.47**	.56**	.83**
Emotional Disclosure	.03	<b>.11</b>	.00	.04	.49**	1.00	.37**	.79**
Cognitive Disclosure	.01	-.03	<b>.08</b>	.05	.47**	.38**	1.00	.78**
Average Disclosure	.04	.07	.04	<b>.06</b>	.82**	.78**	.78**	1.00

*Note:* Numbers above the diagonal apply to men and numbers below the diagonal to women. Numbers in bold identify monoconstruct, heteromethod correlations. Numbers in italics identify heteroconstruct, monomethod correlations. \*  $p < .05$ , \*\*  $p < .001$

Table 2

Correlations Between Self- and Observer-Report: Empathic Responding

	Self-Report				Observer-Report			
	Understanding	Validation	Caring	Average Empathy	Understanding	Validation	Caring	Average Empathy
<u>Self-Report</u>								
Understanding	1.00	.34**	.55**	.72**	<b>.12</b>	.08	.15*	.17*
Validation	.23**	1.00	.51**	.84**	.18*	<b>.17*</b>	.04	.18*
Caring	.59**	.45**	1.00	.82**	.19**	.19**	<b>.14*</b>	.24**
Average Empathy	.69**	.79**	.85**	1.00	.21**	.19**	.13	<b>.24**</b>
<u>Observer-Report</u>								
Understanding	<b>.10</b>	.09	.04	.10	1.00	.43**	.13	.74**
Validation	.15*	<b>.13</b>	.10	.16*	.50**	1.00	.23**	.77**
Caring	.01	.01	<b>.01</b>	.01	.19**	.34**	1.00	.63**
Average Empathy	.11	.11	.07	<b>.12</b>	.78**	.82**	.65**	1.00

*Note:* Numbers above the diagonal apply to men and numbers below the diagonal to women. Numbers in bold identify monoconstruct, heteromethod correlations. Numbers in italics identify heteroconstruct, monomethod correlations. \*  $p < .05$ , \*\*  $p < .001$



Table 3

Correlations Between Self- and Observer-Report of Partner: Self-Disclosure

	Self-Report				Observer-Report			
	Factual Disclosure	Emotional Disclosure	Cognitive Disclosure	Average Disclosure	Factual Disclosure	Emotional Disclosure	Cognitive Disclosure	Average Disclosure
<u>Self-Report</u>								
Factual Disclosure	1.00	.46**	.11	.67**	<b>.09</b>	.02	-.02	.04
Emotional Disclosure	.35**	1.00	.10	.57**	.08	<b>.03</b>	.07	.08
Cognitive Disclosure	.11	.24*	1.00	.77**	-.07	-.21**	<b>.10</b>	-.07
Average Disclosure	.61**	.64**	.79**	1.00	.02	-.13	.08	<b>-.01</b>
<u>Observer-Report</u>								
Factual Disclosure	<b>.15*</b>	.15*	-.02	.10	1.00	.49**	.47**	.82**
Emotional Disclosure	.23**	<b>.21**</b>	-.03	.15*	.47**	1.00	.38**	.78**
Cognitive Disclosure	.04	.11	<b>.00</b>	.06	.56**	.37**	1.00	.78**
Average Disclosure	.18**	.20**	-.02	<b>.13</b>	.83**	.79**	.78**	1.00

*Note:* Numbers above the diagonal apply to men and numbers below the diagonal to women. Numbers in bold identify monoconstruct, heteromethod correlations. Numbers in italics identify heteroconstruct, monomethod correlations. \*  $p < .05$ , \*\*  $p < .001$

Table 4

Correlations Between Self- and Observer-Report of Partner: Empathic Responding

	Self-Report				Observer-Report			
	Understanding	Validation	Caring	Average Empathy	Understanding	Validation	Caring	Average Empathy
<u>Self-Report</u>								
Understanding	1.00	.38**	.68**	.81**	<b>.09</b>	.08	.01	.08
Validation	.54**	1.00	.45**	.78**	.10	<b>.08</b>	.00	.08
Caring	.76**	.49**	1.00	.85**	.16*	.09	<b>.02</b>	.12
Average Empathy	.89**	.81**	.87**	1.00	.14*	.10	.01	<b>.11</b>
<u>Observer-Report</u>								
Understanding	<b>.25**</b>	.22**	.28**	.29**	1.00	.50**	.19**	.78**
Validation	.28**	<b>.15*</b>	.23**	.25**	.43**	1.00	.34**	.82**
Caring	.08	.05	<b>.19**</b>	.12	.13	.23**	1.00	.65**
Average Empathy	.29	.20**	.33**	<b>.31**</b>	.74**	.77**	.63**	1.00

*Note:* Numbers above the diagonal apply to men and numbers below the diagonal to women. Numbers in bold identify monoconstruct, heteromethod correlations. Numbers in italics identify heteroconstruct, monomethod correlations. \*  $p < .05$ , \*\*  $p < .001$

Table 5

Correlations Between Self- and Partner-Report of Partner: Self-Disclosure

	Self-Report of Partner				Partner-Report			
	Factual Disclosure	Emotional Disclosure	Cognitive Disclosure	Average Disclosure	Factual Disclosure	Emotional Disclosure	Cognitive Disclosure	Average Disclosure
<u>Self-Report</u>								
Factual Disclosure	1.00	.46**	.11	.67**	<b>.12</b>	.07	.03	.09
Emotional Disclosure	.35**	1.00	.10	.57**	.06	<b>.14*</b>	.03	.07
Cognitive Disclosure	.11	.24**	1.00	.77**	.06	-.07	<b>.17*</b>	.14
Average Disclosure	.61**	.64**	.80**	1.00	.11	.02	.14*	<b>.16*</b>
<u>Partner-Report</u>								
Factual Disclosure	<b>.09</b>	.11	.07	.12	1.00	.36**	.22**	.66**
Emotional Disclosure	.04	<b>.06</b>	.03	.06	.28**	1.00	.16*	.49**
Cognitive Disclosure	-.05	-.06	<b>.31**</b>	.17*	.29**	.17**	1.00	.85**
Average Disclosure	.02	.02	.24**	<b>.18*</b>	.71**	.52**	.82**	1.00

*Note:* Numbers above the diagonal apply to men and numbers below the diagonal to women. Numbers in bold identify monoconstruct, heteromethod correlations. Numbers in italics identify heteroconstruct, monomethod correlations. \*  $p < .05$ , \*\*  $p < .001$

Table 6

Correlations Between Self- and Partner-Report of Partner: Empathic Responding

	Self-Report of Partner				Partner-Report			
	Understanding	Validation	Caring	Average Empathy	Understanding	Validation	Caring	Average Empathy
<u>Self-Report</u>								
Understanding	1.00	.38**	.68**	.81**	<b>.39**</b>	.35**	.39**	.47**
Validation	.54**	1.00	.45**	.78**	.26**	<b>.41**</b>	.40**	.47**
Caring	.76**	.49**	1.00	.85**	.33**	.39**	<b>.46**</b>	.50**
Average Empathy	.89**	.81**	.87**	1.00	.40**	.47**	.51**	<b>.59**</b>
<u>Partner-Report</u>								
Understanding	<b>.26**</b>	.20**	.28**	.29**	1.00	.23**	.59**	.69**
Validation	.46**	<b>.44**</b>	.49**	.54**	.34**	1.00	.45**	.79**
Caring	.38**	.31**	<b>.48**</b>	.46**	.55**	.51**	1.00	.85**
Average Empathy	.48**	.42**	.53**	<b>.56**</b>	.72**	.84**	.82**	1.00

*Note:* Numbers above the diagonal apply to men and numbers below the diagonal to women. Numbers in bold identify monoconstruct, heteromethod correlations. Numbers in italics identify heteroconstruct, monomethod correlations. \*  $p < .05$ , \*\*  $p < .001$

Table 7

*Predictors of Differences Between Self- and Observer-Report of an Individual's Own Behavior*

Fixed Effect	Self-Disclosure			Empathic Responding		
	$\pi$	$SE$	$t$	$\pi$	$SE$	$t$
Male Global Distress	-0.01	0.01	-2.20*	-0.01	0.01	-2.07*
Male Avoidance	-0.03	0.01	-2.98*	-0.01	0.01	-1.04
Male Ambivalence	-0.02	0.01	-1.41	-0.02	0.01	-2.18*
Female Global Distress	-0.01	0.01	-0.88	-0.01	0.01	-1.20
Female Avoidance	-0.02	0.01	-1.80	-0.03	0.01	-3.19*
Female Ambivalence	0.00	0.01	-0.01	0.00	0.01	-0.17

*Note.* Fixed effects reported are from separate equations.  $df = 397$  for all fixed effects.  $SE$  = standard error. \*  $p < .05$

Table 8

*Predictors of Differences Between Self- and Observer-Report of Partner's Behavior*

Fixed Effect	Self-Disclosure			Empathic Responding		
	$\pi$	$SE$	$t$	$\pi$	$SE$	$t$
Male Global Distress	-0.02	0.01	-2.77*	-0.02	0.01	-2.63*
Male Avoidance	-0.02	0.01	-2.19*	-0.04	0.01	-4.01*
Male Ambivalence	-0.02	0.01	-1.98*	-0.01	0.01	-0.47
Female Global Distress	-0.01	0.01	-1.79	-0.01	0.01	-2.74*
Female Avoidance	0.01	0.01	0.46	-0.02	0.01	-1.66
Female Ambivalence	0.00	0.01	0.35	-0.01	0.01	-1.12

*Note.* Fixed effects reported are from separate equations.  $df = 397$  for all fixed effects.  $SE$  = standard error. \*  $p < .05$

Table 9

*Effect of Self-Disclosure and Empathic Responding on Speaker Intimacy*

Fixed Effect	Self-Report			Observer-Report		
	$\pi$	$SE$	$t$	$\pi$	$SE$	$t$
Male Intercept, $\pi_{m0}$	1.35	0.02	62.87**	1.36	0.02	56.08**
Male Disclosure, $\pi_{m1}$	0.15	0.03	4.98**	0.08	0.02	3.33**
Female Empathy, $\pi_{m2}$	0.14	0.02	6.36**	0.01	0.03	0.26
Male Disclosure $\times$ Female Empathy, $\pi_{m3}$	0.06	0.04	1.48	0.00	0.05	-0.02
Female Intercept, $\pi_{f0}$	1.47	0.02	69.61**	1.46	0.02	59.34**
Female Disclosure, $\pi_{f1}$	0.13	0.03	4.34**	-0.01	0.03	-0.25
Male Empathy, $\pi_{f2}$	0.16	0.02	8.90**	0.11	0.03	3.36**
Female Disclosure $\times$ Male Empathy, $\pi_{f3}$	-0.01	0.03	-0.42	0.01	0.04	0.20

Note. Findings regarding observer-report data are from an earlier study (Mitchell et al., 2008) and are presented here to facilitate comparison. For self-report data, female empathy refers to men's report of their female partner's empathy and male empathy refers to women's report of their male partner's empathy.  $df = 101$  for male and female intercepts.  $df = 400$  for all other fixed effects for self-report data.  $df = 393$  for all other fixed effects for observer-report data.  $SE$  = standard error. \*\* $p < .01$

Table 10

*Effect of Self-Disclosure and Empathic Responding on Listener Intimacy*

Fixed Effect	Self-Report			Observer-Report		
	$\pi$	$SE$	$t$	$\pi$	$SE$	$t$
Male Intercept, $\pi_{m0}$	1.35	0.02	59.89 **	1.34	0.02	56.90**
Male Empathy, $\pi_{m1}$	0.12	0.03	3.88**	0.09	0.03	2.81**
Female Disclosure, $\pi_{m2}$	0.17	0.03	4.84**	0.02	0.03	0.61
Male Empathy $\times$ Female Disclosure, $\pi_{m3}$	-0.03	0.08	-0.39	0.02	0.04	0.36
Female Intercept, $\pi_{f0}$	1.44	0.02	69.92**	1.44	0.02	61.22**
Female Empathy, $\pi_{f1}$	0.18	0.03	5.85**	-0.01	0.04	-0.29
Male Disclosure, $\pi_{f2}$	0.17	0.03	5.64**	0.10	0.03	3.01**
Female Empathy $\times$ Male Disclosure, $\pi_{f3}$	0.04	0.04	0.89	-0.01	0.05	-0.15

Note. Findings regarding observer-report data are from an earlier study (Mitchell et al., 2008) and are presented here to facilitate comparison. For self-report data, female disclosure refers to men's report of their female partner's disclosure and male disclosure refers to women's report of their male partner's disclosure.  $df = 101$  for male and female intercepts.  $df = 400$  for all other fixed effects for self-report data.  $df = 393$  for all other fixed effects for observer-report data.  $SE$  = standard error. \*\* $p < .01$



Table 11

*Effect of Personal Characteristics on Self-Report of Behavior, Controlling for Observer-Report of Behavior*

Fixed Effect	Self-Disclosure				Empathic Responding			
	$\pi$	$SE$	$t$	$p$	$\pi$	$SE$	$t$	$p$
Male Global Distress	0.00	0.01	-0.38	<b>0.71</b>	-0.02	0.00	-4.53	0.00
Male Avoidance	-0.02	0.01	-2.32	0.02	-0.02	0.01	-2.61	<b>0.01</b>
Male Ambivalence	0.00	0.01	-0.08	0.94	-0.02	0.01	-2.46	0.01
Female Global Distress	0.00	0.01	-0.51	0.61	-0.01	0.00	-3.35	<b>0.00</b>
Female Avoidance	-0.02	0.01	-1.71	0.09	-0.03	0.01	-3.90	0.00
Female Ambivalence	0.01	0.01	1.06	0.29	0.00	0.01	-0.43	0.67

Note. Fixed effects reported are from separate equations.  $df = 397$  for all fixed effects.  $SE$  = standard error. Numbers in bold indicate significance findings which differ from main effects or trends found using difference scores.

Table 12

*Effect of Personal Characteristics on Self-Report of Partner Behavior, Controlling for Observer-Report of Partner Behavior*

Fixed Effect	Self-Disclosure				Empathic Responding			
	$\pi$	$SE$	$t$	$p$	$\pi$	$SE$	$t$	$p$
Male Global Distress	-0.01	0.00	-2.59	0.01	-0.02	0.01	-3.17	0.00
Male Avoidance	-0.03	0.01	-3.94	0.00	-0.03	0.01	-5.04	0.00
Male Ambivalence	-0.01	0.01	-1.38	<b>0.17</b>	0.00	0.01	-0.40	0.69
Female Global Distress	0.00	0.00	-0.25	<b>0.81</b>	-0.02	0.01	-3.73	0.00
Female Avoidance	0.00	0.01	-0.39	0.70	-0.01	0.01	-1.54	0.12
Female Ambivalence	0.01	0.01	1.09	0.28	-0.01	0.01	-1.88	<b>0.06</b>

*Note.* Fixed effects reported are from separate equations.  $df = 397$  for all fixed effects.  $SE$  = standard error. Numbers in bold indicate significance findings which differ from either main effects or trends found using difference scores.

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